

Brief summary of the most relevant parts of references

E1 (DE 1 273 169) relates to a process of molding polyethylene having high molecular weight. According to claim 1, E1 discloses a process of molding a polyethylene having high molecular weight, wherein the polyethylene, used as a powder, is first pre-heated, then filled into a mold and formed therein under pressure, characterized in that the polyethylene powder is pre-heated up to a temperature that is higher than the crystalline melting point thereof and then it is filled into said mold which is heated up to a temperature slightly below the crystalline melting point of the polymer. E1 differs from the subject-matter claimed in the present application in that in E1 polyethylene is used in the form of a powder (we found a definition of "powder" as "usually smaller than 1000 micrometers), while the granulate particles used for the plastic molded body of the present application have a size in the range from 2 to 10 mm.

E3 (DE 15 29 852 A1) relates to a mold for the preparation of polymer articles by sintering. According to claim 1, E3 relates to a mold for the preparation of polymer articles by sintering, wherein after sintering the articles are quenched, characterized in that the mold consist of a porous sintered metal, preferably made of a chromium nickel-based steel.

D3 (FR 1 277 617 A) relates to process for the preparation of a porous body of synthetic resins. As synthetic resin aliphatic olefins, such as polyethylene or polypropylene, may be used. It is furthermore disclosed in D3 that the particles preferably have a size of not larger than 0.1 mm (column 2, lines 11-13). In the examples of D3 as well as claim 1 the term polyethylene powder ("polymers en poudre") is used which indicates that the polymer to be used is a powder and has thus a particle size smaller than 2 mm.

D4 (BE 561 346 A) relates to sponge-like or cellular materials made of polyolefins or copolyolefins such as polypropylene, polybutene, polybutadiene, or polyisoprene. It is disclosed in D4 that the use of polymers in the form of a powder is preferable (see page 2, last paragraph: "...est de preference qui permette le traitement de polymers pulvérulents..."). Also, in the Examples of D4 the polymer is used as a powder without an exception. As a consequence, the polymer particles used in D4 have a size smaller than 2 mm.

D5 (DE 11 39 972 B) relates to a process for the preparation of porous bodies of highmolecular thermoplastic resins. According to claim 1, D5 relates to a process for the

preparation of porous molded articles of high molecular thermoplastic resins by sintering of small pieces of said polymer at elevated temperature with or without pressure, characterized in that a bed of small pieces of polyethylene having a molecular weight of 100,000 is heated up in an air-free atmosphere, optionally in the presence of inert gases or in vacuum, to a temperature between 150°C and a temperature at which, under consideration of the applied pressure, no decomposition and/or gel formation of the polyethylene occurs, and at the same time molding the same. The size of the small pieces of the polymer is not specified in the description of D5. In Examples 1 to 3 of D5, the polymer has a particle size of less than 0.3 mm (column 5, lines 59, column 6, line 8, column 6, line 34).

D6 (DE 26 57 943 A) relates to a process of polymeric materials having open pores. The process is characterized in that a thermoplastic polymer in the form of a powder is compacted at a pressure of 10 to 250 kp/cm² (see for example claim 1: "...durch Pressen eines pulverförmigen thermoplastischen Polymers..."). Therefore, the polymer used in D6 does not have a particle size of 2 mm to 10 mm but is a powder.

D8 (DE 1 092 649 B) relates to a process for the preparation of porous molded articles of polypropylene. According to claim 1, D8 relates to a process for the preparation of a porous molded article of polypropylene by sintering at elevated temperature and preferably elevated pressure, characterized in that, prior to sintering the polypropylene to be used is first extracted with oxygen-containing solvents for lower molecular amorphous polypropylene and then with hydrocarbons. In doing so low molecular contents and essentially amorphous contents having a relatively low-molecular weight are removed from the polypropylene and the difficulties which occur during sintering of the polypropylene are overcome. The polypropylene to be sintered may be used as a powder, granulate or pieces of other shapes. It is however preferable that the polypropylene is used as a powder or as flakes (column 3, lines 53-56). It is not disclosed in D8 that the particles have a size in the range of 2 to 10 mm.